

REMARKS

Status of the Claims

Claims 1, 5-8 and 12-22 are currently pending in the application. By this Amendment, claims 1, 6, 8, 5, 12, 13, and 18 have been amended, and claims 4 and 11 have been cancelled. Support for these claim amendments can be found in the originally filed specification, for example at page 6, lines 6-24; page 14, line 25; page 20, line 26 to page 23, line 23; and original claims 4 and 11. No new matter has been added.

In the event that the Examiner declines to enter the present Amendment, and (i) any portion of the present Amendment would place some of the claims in better form for appeal if a separate paper were filed containing only such amendments or (ii) any proposed amendment to any claim would render that claim allowable, Applicant respectfully requests that the Examiner inform Applicant of the same pursuant to MPEP §714.13.

Rejected Under 35 U.S.C. 112

Claims 1, 4-8 and 11-22 are rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description for the reasons set forth at page 2 of the Office Action. Specifically, the Examiner has argued that "the argued 'comprises' indicates that other things may be present including other carbon amounts that change the overall carbon content." Applicants disagree; however, in order to advance prosecution, claims 1, 8, and 18 have been amended to recite "wherein R^a is an alkyl group having from about 12 to about 18 carbon atoms." Furthermore, one of ordinary

skill in the art would know, if only by a Google Patent search of the tradename, that HiTEC®-059 is a dimethyloctadecyl phosphonate available from Afton Chemical Corporation (formerly Ethyl Corporation), which comprises an alkyl group containing 18 carbon atoms. For example, U.S. Patent Publication No. 2005/0202979 discloses the composition of HiTEC®-059 at para. [0117]. Accordingly, the rejection is moot. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 6 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention for the reasons set forth at pages 2-3 of the Office Action. Applicants disagree; however, in order to advance prosecution, claim 6 has been amended to delete "a minor amount," and claim 13 has been amended to recite "about 90 to about 99 wt.% base oil." Accordingly, the rejection is moot. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejections Under 35 U.S.C. § 103

Cook in view of Burjes, STN Structure, and Papay

Claims 1, 4-5, 7-8 and 11-20 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Cook et al. (U.S. Publication No. 2002/0119895 hereinafter, "Cook") in view of Burjes et al. (U.S. Patent No. 4,755,311 hereinafter, "Burjes"), STN structure, and Papay et al. (U.S. Patent No. 4,293,432 hereinafter, "Papay") for the reasons set forth at pages 3-7 of the Office Action. Applicants disagree for at least the reasons of record, as well as those below.

The present claims recite a wind turbine gear additive concentrate and a wind turbine gear additive composition, each comprising components (a)-(d), respectively, and a method of manufacturing a composition suitable for use in a wind turbine gear assembly as recited in claim 18, wherein the composition demonstrates improved load carrying capacity as compared to a composition devoid of the hydrocarbylamine compound and alkylphosphoro(mono)thioate compound. In particular, the present specification teaches that the combination of (b)(i) and (b)(ii) improves the load carrying capacity of lubricant compositions comprising such materials. For instance, Example 1 contained only EP1 and demonstrated marginal load carrying capacity. See Table 1 on page 22. Examples 2 through 9 showed fluids containing different additives to assess whether they improved the load carrying capacity of the fluids. Yet none of the combination of additives improved the load carrying capacity of the oils – i.e., all the Timken load results were the same as (e.g., Example 8) or even less than Example 1 which only contained EP1 (e.g., Examples 2-7 and 9). Applicants especially point out that Example 9 – in which FM3 (an alkylene amine) was mixed with AW2 (an antiwear agent containing both S and P) – demonstrated a lesser Timken load capacity (65 lbs.) as compared to Example 1 (70 lbs.) See *id.*

But Examples 10 through 16 demonstrate unexpected results for fluids containing presently claimed components (b)(i) and (b)(ii) – e.g., AW3, the mixture of alkylphosphoro(mono)thioates and hydrocarbylamines. See Table 2 on page 22. All of Examples 10 through 16 demonstrated a Timken load carrying capacity results greater than 90 lbs. See *id.* This result is unexpected at least because the combination of FM3 (an alkylene amine) and AW2 (an antiwear agent containing both S and P) showed no

benefit, as discussed above. This unexpected result is further demonstrated in Table 3 on page 23 of the present specification. Additionally, this unexpected result was achieved in the presence of different EP agents (e.g., EP1 and EP2), different friction modifiers (FM1, FM2, and FM3), and in fluid both containing and not containing a dispersant (DISP).

None of this is taught or suggested by Cook. Cook discloses a lubricating composition comprising a molybdenum composition which improves the antiwear properties of the lubricant. See paras. [0001] and [0006] of Cook. The reference specifically teaches that it is the use of molybdenum containing compositions in combination with specific additives that improves the antiwear properties of lubricants. See para. [0013]. The Examiner has argued that that Cook discloses a composition comprising an "amine salt of monothiophosphoric acid wherein the amine includes N-oley-1,3-diaminopropane and which corresponds to the presently claimed combination of hydrocarbylamine and alkylphosphoro(mono)thioate," and that "the argued antiwear compounds of the cited art are expected to give improved load carrying capacity in that wear is proportional to load and something that decreases wear is expected to increase load carrying capacity." See page 13 of the Office Action. The Examiner is again reminded that Cook teaches that molybdenum is an important aspect of its disclosed composition, as it is the combination of molybdenum in combination with specific additives that improves the antiwear properties of lubricants. See para. [0013]. Therefore, Cook teaches, at most, that molybdenum in combination with an amine salt of monothiophosphoric acid can provide antiwear characteristics. However, the reference is silent with respect to the characteristics of an amine salt of

monothiophosphoric acid without molybdenum, much less specifically teach or suggest that presently claimed components (b)(i) and (b)(ii) in combination with components (a), (c), and (d) can provide improved load carrying capacity.

The Examiner has further argued that the argued examples are "not in commensurate in scope with the [cited] art," yet Applicants point out that among the disclosed examples of antiwear/extreme pressure agents in *Cook*, metal dithiophosphates and thiophosphoric acids – e.g., antiwear agents containing both S and P – and sulfurized olefins are included. As discussed above, the presently disclosed Examples have shown that the presently claimed invention demonstrated improved load carrying capacity as compared against sulfurized olefins (e.g., Example 1 containing EP1) and antiwear agents containing both S and P (e.g., Example 9 with alkylene amines).

Moreover, neither *Burjes*, *STN Structure*, nor *Papay* overcome the deficiencies in *Cook*. In particular, none of the references teaches or suggests the unexpected results discussed above. Accordingly, the reference is unobvious in light of the combination of references. Reconsideration and withdrawal of the rejection is respectfully requested.

Cook in view of Burjes, STN Structure, and Norman

Claim 6 is rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Cook* in view of *Burjes* and *STN structure* as applied to claims 1, 4-5, 7-8 and 11-20, and further in view of *Norman et al.* (U.S. Patent No. 5,942,470 hereinafter, "*Norman*") for the reasons set forth at pages 7-8 of the Office Action. Applicants disagree for at least the reasons of record, as well as the following reasons.

Claim 6 depends from independent claim 1 and is patentable for the same reasons as claim 1. In particular, for at least the reasons above, *Cook* in view of *Burjes* and *STN Structure* fails to teach or suggest the unexpected results that can be seen in a wind turbine gear additive or composition comprising a combination of hydrocarbylamine and alkylphosphoro(mono)thioate, as taught in the present disclosure.

Moreover, *Norman* does not overcome the deficiencies of *Cook* in view of *Burjes* and *STN Structure* for the same reasons. For at least the foregoing reasons, the present invention is unobvious in light of the combination of *Cook*, *Burjes*, *STN Structure*, and *Norman*. Reconsideration and withdrawal of the rejection are respectfully requested.

Cook in view of *Burjes*, *STN Structure*, *Papay*, and *Laing*

Claims 21-22 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Cook* in view of *Burjes*, *STN structure*, and *Papay*, and further in view of *Laing* et al. (U.S. Patent No. 4,710,100 hereinafter, "*Laing*") for the reasons set forth at page 8 of the Office Action. Applicants disagree for the reasons of record, as well as those below.

Claims 21-22 depend from independent claim 8 and are patentable for the same reasons. In particular, and as discussed above, *Cook* in view of *Burjes*, *STN Structure*, and *Papay* fail to teach or suggest the unexpected results that can be seen in a wind turbine gear additive or composition comprising a combination of hydrocarbylamine and alkylphosphoro(mono)thioate, as taught in the present disclosure.

Moreover, *Laing* does not overcome the deficiencies of *Cook* in view of *Burjes*, *STN Structure*, and *Papay* for the same reasons. For at least the foregoing reasons, the present invention is unobvious in light of the combination of *Cook*, *Burjes*, *STN Structure*, *Papay*, and *Laing*. Reconsideration and withdrawal of the rejection are respectfully requested.

CONCLUSION

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing all claims into condition for allowance. Applicants submit that the proposed amendments of claims 1, 6, 8, 5, 12, 13, and 18 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner at least because all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the final action by the Examiner presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that the entering of the Amendment would allow the Applicants to reply to the final rejections and place the application into condition for allowance.

Finally, Applicants submit that entry of the amendment would place the application into better form for Appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is not rendered obvious in view of the cited references applied against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 50-2961.

Respectfully submitted,

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